

Treatment of Alcohol Dependence With Psychological Approaches

A broad range of psychological therapies and philosophies currently are used to treat alcoholism, as noted in a recent review (Miller et al. 1995) that cited 25 approaches, including social skills training, motivational enhancement, behavior contracting, cognitive therapy, marital and family therapy, aversion therapy, and relaxation training. As might be expected, these varied approaches have different levels of scientific support for their ability to produce positive outcomes. The task for the scientific community is to evaluate the various approaches and determine which offer the best chances of successful outcome, with the understanding that some types of treatment may have better results for certain types of clients.

Recent progress toward the overall goal of evaluating psychological therapies has been greatest in four areas, which are consequently the principal topics of the section to follow. These are:

- Client-treatment matching, or the use of a client's individual characteristics (such as gender, anger level, social functioning, and severity of alcohol dependence) to select an appropriate treatment therapy.
- The effectiveness of professional treatments modeled on the 12 steps of Alcoholics Anonymous (AA).
- The value of supportive ancillary counseling for life problems that often cooccur with alcoholism (such as difficult family relationships, employment problems, and psychiatric disorders).
- The effects of variations in treatment intensity (the frequency and duration of therapy) on treatment outcomes.

This section focuses on these topics, but progress has been made in other related areas as well. Advances in our knowledge of the effectiveness of “brief intervention,” in which health care providers offer brief sessions of advice, are described in the previous section of this chapter, “Screening and Brief Intervention for Alcohol Problems.” In addition, social and family interventions continue to find support in research reviews for their use with alcohol and other substance abusers (Baucom et al. 1998; Edwards and Steinglass 1995; Stanton and Shadish 1997). Recent studies of social and family interventions, however, have largely been long-term follow-ups or reanalyses of studies cited in the *Ninth Special Report to the U.S. Congress on Alcohol and Health* (National Institute on Alcohol Abuse and Alcoholism 1997) and, as such, will not be discussed here.

Client-Treatment Matching

No single psychological treatment approach has been found clearly superior in promoting long-term recovery from alcoholism (Donovan and Mattson 1994). Instead, many different treatment approaches appear to be equally effective. However, it may be the case that an overall similarity of outcomes hides certain relationships whereby one type of treatment might produce better results for certain patients. For example, patients with long-term, stable marriages might be expected to benefit more from marital and family counseling approaches than would patients in shorter term or unstable relationships. Researchers have hypothesized that if they could identify important client characteristics and the treatments that work best for them, clients could be “matched” to the treatment from which they would benefit most. Prior to 1997, several studies had examined potential client-treatment matches, but these early studies were small in

scale and limited in scope (see Mattson et al. 1994 for a review).

A project called Matching Alcohol Treatments To Client Heterogeneity (Project MATCH) has provided the most careful and extensive test to date of the contributions of client-treatment matching to treatment outcome (Project MATCH Research Group 1997*a,b*, 1998*a,b*). In this multisite clinical trial, 1,726 clients were assigned randomly to either a cognitive-behavioral, a motivational enhancement, or a 12-step facilitation treatment. While the study showed that the three treatments produced comparable outcomes, the study's primary goal was not to evaluate which treatment produced the best outcomes per se, but to evaluate whether treatments that were appropriately matched to the client's needs produced better outcomes than did treatments that were not matched. The study investigated many client characteristics, among them gender, alcohol involvement, cognitive impairment, meaning seeking (spirituality), motivation, sociopathy, social network support for drinking, alcohol dependence, level of anger, interpersonal dependency, prior AA involvement, self-efficacy, social functioning, antisocial personality disorder, type and severity of psychiatric disorder, religiosity, alcoholism type, and readiness to change. Each of the characteristics was evaluated to see whether clients who had different variations of the characteristic benefited differently from the various treatments provided.

Participants in the study were divided into two general treatment groups: 952 received only outpatient treatment, and 774 received outpatient aftercare following a more intense course of inpatient treatment (hereafter labeled the aftercare group). The study's results were reported separately for these two groups. Outcomes were measured at 1 year following treatment for both groups as well as at the 3-year mark for the outpatient group.

The results of Project MATCH yielded minimum support for matching the patient characteristics studied to the treatment types. Patients with only 4 of the 21 potential matching characteristics had

different responses depending on the treatment received. These characteristics were:

- **Alcohol Dependence:** In the aftercare group, individuals with high levels of alcohol dependence benefited more from 12-step treatment than from cognitive-behavioral treatment, whereas the reverse was true for patients low in dependence.
- **Psychopathology:** In the outpatient group, those without psychopathology were found to benefit more from 12-step facilitation than from cognitive-behavioral therapy.
- **Anger:** Also in the outpatient arm of the trial, patients high in anger had more successful outcomes with the motivational enhancement approach than with the other two approaches.
- **Social Network Support for Abstinence:** Patients whose social networks offered less support for abstinence had better outcomes in 12-step facilitation than in motivational enhancement therapy.

In sum, Project MATCH's findings challenged the notion that patient-treatment matching is a prerequisite for optimal alcoholism treatment. Other than the four relationships described above, the findings did not show that matches between patient characteristics and treatments produced substantially better outcomes. The paucity of matching findings might be seen in the context of the finding that the three treatments studied in Project MATCH were approximately equal in their efficacy. Any one of the treatments, therefore, would be expected to achieve results similar to the others. Moreover, Project MATCH showed that reductions in drinking observed at the 1-year mark were sustained over the 3-year follow-up period (Project MATCH 1998*a*).

Professional Treatment Modeled on the 12 Steps of Alcoholics Anonymous

Participation in AA or professional treatment programs based on the 12 steps of AA is the dominant approach to alcoholism treatment in the United States. Higher levels of AA attendance

during and following professional treatment are consistently associated with better outcomes, but AA affiliation without professional treatment has not routinely resulted in improvement (Emrick et al. 1993). Two recent studies have made significant progress in confirming the effectiveness of professional treatment based on 12-step principles. One of these studies was based on further analysis of the Project MATCH trial just discussed (Project MATCH 1998*b*). Although the trial had not been designed to test which of the three treatments (cognitive-behavioral, motivational enhancement, or 12-step facilitation) offered the best outcomes, one of the findings to emerge was that each produced approximately equal results according to the study's principal outcome measures—the percentage of abstinent days and the number of drinks per drinking day. In the outpatient group, however, the 12-step treatment had more favorable results according to several other measures, including (1) continuous abstinence from alcohol during the first posttreatment year, (2) length of time before first relapse (with longer times indicating better outcomes), (3) percentage of clients not drinking at 1-year follow-up, and (4) percentage of clients not drinking at 3-year follow-up. Thus, by all of the measures studied, 12-step clients achieved outcomes at least as pronounced and durable as those of clients in other therapies, and by some measures, 12-step clients achieved better outcomes.

The other recent study on the topic of professional treatment modeled on the 12-step approach was an analysis of 15 treatment programs offered through the U.S. Department of Veterans Affairs (Ouimette et al. 1997). Programs were classified as 12-step, cognitive-behavioral, or a combination of the two on the basis of the primary treatment philosophy employed. The researchers followed 3,018 clients for 1 year. Patients were not randomized to different treatment conditions in this study, as they had been in the Project MATCH trial. Results at 1-year follow-up indicated that patients in 12-step programs were more likely to be abstinent than were patients from cognitive-

behavioral or mixed programs (25 percent vs. 18 and 20 percent, respectively). Most of the other variables studied—mean alcohol consumption, alcohol dependence symptoms, use of other drugs, depression, anxiety, and arrests—revealed no significant differences between patients treated by different approaches.

How 12-step approaches function to produce positive treatment outcomes is another important topic of study. Findings from the Project MATCH trial indicated that for clients who had social networks that supported drinking, 12-step facilitation therapy was more effective than motivational enhancement therapy at the 3-year follow-up (Longabaugh et al. 1998). Involvement in AA was a partial mediator of this effect. Among those clients who had social networks that were supportive of drinking and who were assigned to 12-step facilitation treatments, those involved in AA had better 3-year outcomes.

Another study on this topic followed 100 clients (not randomly assigned to treatment) for 6 months after treatment and found that five patient characteristics were related to both stronger affiliation with AA and better treatment outcome (Morganstern et al. 1997). The five characteristics were self-efficacy, commitment to abstinence, cognitive coping, behavioral coping, and primary appraisal of harm due to drinking. These results suggest that these five characteristics should be considered in future studies that seek to define the underlying mechanisms of effectiveness for 12-step-based treatments.

Supportive Ancillary Services

Typically, clients entering treatment arrive with a number of other problems in addition to alcoholism. Problems that often appear along with alcoholism include other drug abuse, mental health disorders (particularly depression), unemployment, domestic violence, and legal problems. Two consequences flow from this “bundling” of alcoholism and related problems. First, measures of treatment success often must be concerned with a wide number of outcomes

Psychological Treatment Outcomes: A Broad Perspective

How effective are psychological interventions for persons experiencing alcohol abuse and alcoholism? At first glance, this question appears to be relatively straightforward. However, attempts to provide simple answers to this question may overlook a number of important considerations. Experts in alcohol research urge moving away from global statements about the effectiveness of alcohol treatments and adopting a broader, more complex perspective on the outcomes of psychological interventions. Among the factors for consideration are the following:

- **Patient Diversity:** Persons who receive treatment for alcohol abuse and alcoholism are a remarkably diverse group. For example, the nature and severity of alcohol problems vary considerably, from severe forms of alcohol dependence to occasional problems with drinking. The major implication here is that judgments about outcomes must take into account individual patient characteristics.
- **Context for Treatment:** Alcohol treatment itself is a complex phenomenon. Specific psychological interventions are part of a larger context that includes expectancies of clinicians and clients as well as different settings, therapist characteristics, treatment intensity, treatment goals, and methods of payment. Thus, treatment actually represents a mix of these factors and attributes.
- **Outcomes Other Than Changes in Drinking Behavior:** Treatment outcome is a multidimensional event. The usual standard for judging the effectiveness of alcohol treatments is change in drinking behavior. While this measure is critical, there are other equally important outcomes that deserve consideration. For example, it is important to understand how alcohol treatment affects patients' rates of illness and death, the nature of psychological disorders that accompany alcohol problems, and the use and costs of medical services triggered by alcohol misuse.
- **Changes in Outcomes Over Time:** In addition to expanding the scope of outcome measures, it is important to consider that relatively few patients remain in the same outcome status over a span of years. At any given time, many factors other than the treatment itself can contribute to positive or less-than-positive results. For example, the extent to which a patient's posttreatment social environment supports the changes resulting from treatment has an enormous effect on long-term outcomes. Thus, it is critical to consider the timing of evaluations of patient outcomes, to distinguish short-term efficacy from the much broader phenomenon of long-term treatment effectiveness, and to examine the factors that hinder or support effectiveness at different stages.

where improvement is sought (see the box, above). Second, treatment for the alcoholism *per se* may have a greater chance of success if the other problems are being successfully addressed by appropriate services. Some recent research has focused on the impact of these supportive ancillary services.

In one study, researchers randomly assigned 94 clients of employee assistance programs to one of two treatments: standard alcoholism counseling or standard alcoholism counseling plus adjunctive professional treatment sessions in areas that may result from, or contribute to, alcohol abuse (McLellan et al. 1997). At 6 months following treatment, patients in both groups had similar rates of abstinence. However, the adjunctive counseling group was more likely to

be working 20 or more hours per week and less likely to be having family conflicts or to have been readmitted for alcohol or drug abuse treatment, arrested, or charged with a crime. In addition, clients assigned to adjunctive counseling stayed in treatment longer and were more likely to complete treatment. These results suggest that treatment programs can improve a broad range of outcomes by giving attention to multiple problem areas as a part of alcohol counseling.

In another recent study of ancillary services (Longabaugh et al. 1995), treatment staff devoted different amounts of time (eight, four, or zero sessions) to relationship enhancement therapy. Sessions included one or more members of the client's social network (family or friends) and were aimed at increasing social support for the client's

abstinence and strengthening the client's investment in his or her social support network. Follow-up results after 18 months were mixed. Eight-session counseling was beneficial when there was either a deficit in the social network's ability to support the client's abstinence or a deficit in the client's investment in the social network. However, four counseling sessions, or none at all, seemed more effective than eight sessions when there were no such deficits in the client's social network.

Intensity of Services

Along with managed care has come pressure to reduce treatment costs and eliminate unnecessary services. This makes more urgent the task of determining what the optimal intensity (or duration and amount) of treatment services for alcoholism should be. Earlier research had noted that there were few differences in long-term outcomes between inpatient and outpatient alcoholism treatment (Finney et al. 1996). Fewer studies have compared the relative effectiveness of more versus less intensive forms of outpatient treatment. Emerging findings, however, suggest that while intensity may not predict long-term outcomes, it may affect the speed at which an individual achieves some control over his or her drinking during treatment.

Project MATCH (although, again, not originally designed to answer the question of optimal treatment intensity) has provided some useful findings on this question. In the Project MATCH trial, the motivational enhancement treatment was less intensive than either the cognitive-behavioral treatment or 12-step facilitation treatment. The motivational enhancement treatment consisted of four individual therapy sessions (administered during weeks 1, 2, 6, and 12 of the trial), whereas both of the other treatments consisted of 12 weekly individual sessions.

In the outpatient group, the three treatments showed similar long-term outcomes at the 1-year and 3-year follow-up stages in terms of the number of abstinent days and drinks consumed

per drinking day. Earlier in the study, however, the short-term outcomes differed: at the end of the 12 weeks of treatment, only 28 percent of the outpatient clients in the lower intensity, motivational enhancement therapy were either abstinent or drinking moderately without problematic consequences, compared with 41 percent of those in both the 12-step facilitation treatment and the cognitive-behavioral treatment. These findings may suggest that lower intensity treatment is slower at helping patients to achieve control over their drinking than is higher intensity treatment. However, among the after-care group, long-term and short-term outcomes were similar for both the more and less intensive therapies. Additional research on treatment intensity from a cost-effectiveness perspective can be found in the chapter on economic and health services perspectives.

In Closing

Treatment outcome studies have repeatedly found large and sustained reductions in drinking among persons seeking help for alcoholism. Still, many individuals continue to suffer problems with alcohol following treatment. Researchers are trying to improve treatment by undertaking further investigations of the factors and conditions that might improve psychological treatment outcomes (as well as ways to supplement psychological treatments with medications—see the next section in this chapter, “Treatment of Alcohol Dependence With Medications”). Recent findings on psychological therapies have suggested that:

- Matching broad categories of client characteristics to treatment modality does not substantially improve overall treatment outcomes.
- Professional treatments based on 12-step approaches can be as effective as other therapeutic approaches and may actually achieve more sustained abstinence.
- Supportive ancillary services can be effective in remediating common problems that cooccur with alcoholism.

- Higher intensity outpatient treatment (12 weekly sessions) may help a client gain control over drinking more quickly.

As this research progresses, it promises to yield further knowledge about the effectiveness of various psychological treatment approaches, the “active ingredients” of those approaches, the proper array of ancillary services that can be offered, and the amount or dosage of treatment that produces the best results.

References

- Baucom, D.H.; Shoham, V.; Mueser, K.T.; Daiuto, A.D.; and Stickle, T.R. Empirically supported couple and family interventions for marital distress and adult mental health problems. *J Consult Clin Psychol* 66(1):53–58, 1998.
- Donovan, D.M., and Mattson, M.E. Alcoholism treatment matching research: Methodological and clinical issues. *J Stud Alcohol Suppl* 12:5–14, 1994.
- Edwards, M.E., and Steinglass, P. Family therapy treatment outcomes for alcoholism. *J Marital Fam Ther* 21(4):475–509, 1995.
- Emrick, C.D.; Tonigan, J.S.; Montgomery, H.; and Little, L. Alcoholics Anonymous: What is currently known? In: McCrady, B.S., and Miller, W.R., eds. *Research on Alcoholics Anonymous: Opportunities and Alternatives*. New Brunswick, NJ: Rutgers Center of Alcohol Studies, 1993. pp. 41–76.
- Finney, J.W.; Hahn, A.C.; and Moos, R.H. The effectiveness of inpatient and outpatient treatment for alcohol abuse: The need to focus on mediators and moderators of setting effects. *Addiction* 91(12):1773–1796, 1996.
- Longabaugh, R.; Wirtz, P.W.; Beattie, M.C.; Noel, N.; and Stout, R.L. Matching treatment focus to patient social investment and support: 18-month follow-up results. *J Consult Clin Psychol* 63(2):296–307, 1995.
- Longabaugh, R.; Wirtz, P.W.; Zweben, A.; and Stout, R.L. Network support for drinking, Alcoholics Anonymous and long-term matching effects. *Addiction* 93(9):1313–1333, 1998.
- Mattson, M.E.; Allen, J.P.; Longabaugh, R.L.; Nickles, C.J.; Connors, G.J.; and Kadden, R.M. A chronological review of empirical studies matching alcoholic clients to treatment. *J Stud Alcohol Suppl* 12:16–29, 1994.
- McLellan, A.T.; Grissom, G.R.; Zanis, D.; Randall, M.; Brill, P.; and O’Brien, C.P. Problem-service “matching” in addiction treatment. A prospective study in 4 programs. *Arch Gen Psychiatry* 54(8):730–735, 1997.
- Miller, W.R.; Brown, J.M.; Simpson, T.L.; Handmaker, N.S.; Tbien, T.H.; Luckie, L.F.; Montgomery, H.A.; Hester, R.K.; and Tonigan, J.S. What works? A methodological analysis of the alcohol treatment outcome literature. In: Hester, R.K., and Miller, W.R., eds. *Handbook of Alcoholism Treatment Approaches: Effective Alternatives*, 2nd ed. Needham Heights, MA: Allyn & Bacon, 1995. pp. 12–44.
- Morganstern, J.; Labouvie, E.; McCrady, B.S.; Kahler, C.W.; and Frey, R.M. Affiliation with Alcoholics Anonymous after treatment: A study of its therapeutic effect and mechanisms of action. *J Consult Clin Psychol* 65(5):768–777, 1997.
- National Institute on Alcohol Abuse and Alcoholism. *Ninth Special Report to the U.S. Congress on Alcohol and Health*. NIH Pub. No. 97-4017. Bethesda, MD: National Institute on Alcohol and Alcoholism, 1997.
- Ouimette, P.C.; Finney, J.W.; and Moos, R.H. Twelve-step and cognitive-behavioral treatment for substance abuse: A comparison of treatment effectiveness. *J Consult Clin Psychol* 65(2): 230–240, 1997.

Project MATCH Research Group. Matching alcoholism treatments to client heterogeneity: Project MATCH post-treatment drinking outcomes. *J Stud Alcohol* 58(1):7–29, 1997*a*.

Project MATCH Research Group. Project MATCH secondary a priori hypotheses. *Addiction* 98(12):1671–1698, 1997*b*.

Project MATCH Research Group. Matching alcoholism treatments to client heterogeneity: Project MATCH three-year drinking outcomes. *Alcohol Clin Exp Res* 22(6):1300–1311, 1998*a*.

Project MATCH Research Group. Matching alcoholism treatments to client heterogeneity: Treatment main effects and matching effects on drinking during treatment. *J Stud Alcohol* 59(6):631–639, 1998*b*.

Stanton, M.D., and Shadish, W.R. Outcome, attrition, and family—Couples treatment for drug abuse. A meta-analysis and review of the controlled, comparative studies. *Psychol Bull* 122(2):170–191, 1997.